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ABSTRACT

Adolescents are the most suicidal population. Gender comparisons within this group show males are four times more likely to kill themselves, while females are three to nine times as likely to attempt suicide. This study compared 1993 and 1995 self-reported suicidal behavior in relation to the risk factors of tobacco use, alcohol use, drug use, school misconduct, academic difficulties, home environment, sexual activity, and violence among adolescents. In the springs of 1993 and 1995, data were gathered from seventh through twelfth grade students in a medium-size Midwest school district. A comparison of the two results generated the following conclusions: (1) independent factors accounted for more variance in male suicidal behavior than in female suicidal behavior; (2) as the level of suicidality increased, the frequency of violent/destructive behaviors increased among both genders; and (3) gender differences were evident as more aggressive/destructive risk behaviors increased the probability of male suicidal tendency. The leading predictor for suicidal activity among 1993 and 1995 males and 1993 females was violence. In contrast, the leading predictor for suicidal tendency among these groups was school misconduct. Consequently, predictors for suicidal tendency, such as unfair rules, were much less associated with aggressive and destructive behaviors than were predictors of suicidal activity. Contains 27 references. (RJM)

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Confirming Gender Differences in Suicide-Related Behaviors among Adolescents

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ABSTRACT

The purpose of this study was to compare 1993 and 1995 self-reported suicidal behavior in relation to the risk factors of tobacco use, alcohol use, drug use, school misconduct, academic difficulties, home environment, sexual activity, and violence among adolescents. Data were gathered from the Survey Instrument of Attitude/Behavior (SIAB) that was administer during the spring of 1993 (N=3,461) and of 1995 (N=921) to seventh through twelfth grade students in a medium size Midwest school district. Stepwise forward regression ordered the independent factors in predicting suicidal activity and tendency for the male and female samples. Logistic regression determined the probabilities of the independent factors in predicting suicidal tendency for the male and female samples. A comparison of the 1993 and 1995 results generated the following conclusions: (1) the independent factors accounted for more variance in male suicidal behavior than in female suicidal behavior, (2) as the level of suicidality increased, the frequency of violent/destructive behaviors increased among both genders, and (3) gender differences were confirmed as more aggressive/destructive risk behaviors increased the probability of male suicidal tendency.

INTRODUCTION

As long as human life has existed, so has the thought and act of suicide been present. Although the overall suicide rate for the general population has remained stable since 1950, the rate for adolescents aged 15-19 has increased 400%, from 2.7 per 100,000 in 1950 to 11.3 per 100,000 in 1988 (Centers for Disease Control, 1991). In addition, an estimated 50 to 312 suicide attempts occur for every committed suicide, distinguishing adolescents as the most suicidal population (Curran, 1987). Yet, within these statistics lie dramatic differences between male and female completions and attempts as males are four times as likely to kill themselves and females are three to nine times as likely to attempt (Blumenthal & Kupfer, 1990). Due to its alarming presence among adolescents, suicide has finally been taken more

seriously as many parents, educators, and health professionals attempt to understand and thus prevent adolescent suicide. However, this task has not been easy since male and female adolescents express depression and suicidality differently and often through a variety of risk-taking and self-destructive behaviors.

THEORETICAL FRAMEWORK

To understand such huge gender discrepancies in suicide rates of completions and attempts as well as suicide-related behaviors, one must analyze the gender differences that are experienced throughout adolescence. Four well-documented behavioral differences between male and female adolescents influence these gender differences in adolescence as well as in suicide: attachment (deJong, 1992; Gilligan, 1982; Wade, 1987), success orientation, aggression, and help seeking (McDowell, 1985; Stillion et al., 1989).

Gender Differences in Adolescent Development

Erik Erikson's (1968, 1975) theory of human development addresses adolescent development in two stages of conflict: Identity versus Identity Confusion and Intimacy versus Isolation. Erikson suggested that one must resolve the conflict of identity before addressing the conflict of Intimacy versus Isolation. Thus, Erikson asserted that one must achieve identity before intimacy. Although "Erikson (1950, 1975) acknowledged that this discrete sequence might be blurred for girls and women so that developing identity and intimacy were two inextricable elements of one process for women," he attributed this difference to women's developmental inadequacies (Bush & Simmons, 1981, p. 191). However, Nancy Chodorow (1974) accounts for these gender differences in identity and intimacy "to the fact that women, universally, are largely responsible for early child care" (p. 43). "Given that for both sexes the primary caretaker in the first three years of life is typically female, the interpersonal dynamics of gender identity formation are different for boys and girls" (Gilligan, 1982, p. 7). Since the female identifies with and ultimately experiences more connection with her same sex parent,

her identity grows out of this sense of attachment and capacity for nurturance. Therefore the female adolescent, as she strives to relate to the external-object world, just as she did with the external presence of her mother, develops a "stronger basis for experiencing another's needs or feelings as one's own" (Chodorow, 1978, p. 167). Thus the "feminine personality comes to define itself in relation and connection to other people more than [the] masculine personality does" (Chodorow, 1974, p. 43-44). This "female need for connection leads women to emphasize husband, children, and close friendship" (Bush & Simmons, 1981, p. 187-188).

In contrast, because the primary caretaker is of the opposite sex, the formation of a boy's identity is dependent upon the separation from his mother. This "need for separation leads men to the public sphere of the bureaucratically organized workplace" (Bush & Simmons, 1981, p. 187-188). Thus, male adolescents tend to focus more on the public/instrumental sphere of academic and athletic success while female adolescents focus on the domestic/expressive sphere of relationships (Bush & Simmons, 1981). Consequently, this gender difference in attachment has greatly influenced male and female success orientations. Brownmiller (1983) reinforced this belief in stating, "a lack of ambition—or a proposed lack of ambition, or a sacrificial willingness to set personal ambition aside—is virtual proof of the nurturant feminine nature which, if absent, strikes at the guilty heart of femaleness itself" (p. 221). Stillion et al. (1989) similarly asserted that "Striving for success continues to be more a male than a female characteristic ... [and] is often considered to be incompatible with some of the traditionally female characteristics such as nurturance" (p. 103).

Therefore, as women have not only defined themselves through human relationships but also judged themselves on their ability to nurture, men have tended to devalue this capacity to nurture since they emphasize the instrumental components of work and achievement (Gilligan, 1982). As several researchers have concluded that girls tend to have

lower self-esteem when compared to boys and that "girls have greater difficulty in coping with this life transition [adolescence] than do boys," many have asserted that this male irreverence of the female relational emphasis is directly related to the female sense of inadequacy (Bush & Simmons, 1981, p. 188; Gilligan, 1982).

These gender differences in attachment and success orientation also influence the dissimilarities in aggression and help seeking behaviors. Curran (1987) asserted that the socialization of adolescents permits girls "fewer outlets for the release of aggression externally ... [such that they] are encouraged to control angry feelings and withhold aggression" (p. 25-26). Curran (1987) also maintained that "females are allowed to cry, feel and manifest sadness, depression, grief ... [and] are encouraged to rely on others, to accept weakness and dependence on external sources of support, to not be strong internally" (p. 26). In contrast, males are encouraged to express anger and aggression toward external objects as Curran (1987) states that "males are encouraged to pull themselves up by their bootstraps ... and to respond to problems with vigor and forthrightness, or at least stoicism" (p. 26). Thus, when faced with stress, depression, or suicide, males are more likely to express their frustration in aggressive behaviors, whereas females are more likely to demonstrate behaviors that are often help-seeking and less aggressive.

Gender Differences in Suicide Completions and Attempts

Several researchers have suggested that these differences in attachment, success orientation, aggression, and help seeking behaviors are directly related to males choosing more lethal methods in attempting suicide and ultimately to a higher completion rate of male suicides as well as to the higher rate of attempts by females (Curran, 1987; deJong, 1992; Stillion et al., 1989; Wade, 1987). As the developmental process of the male adolescent emphasizes independence, success and strength, the male youth is not encouraged to ask for help or express any relational dependence, since either would be an indication of weakness. In

addition, males are allowed to express this strength and autonomy through aggression (Curran, 1987). Consequently, the adolescent male is more likely to use more aggressive suicide methods not only to increase the likelihood of death but also to avoid the humiliation of such a failure (Stillion et al., 1989).

On the other hand, the female experience of adolescence centers upon relationships, an emphasis that has created the societal expectation of females as dependent and emotional such that the female suicide attempt has been commonly viewed as a "cry for help." While the female is more likely to express depression through passive behaviors and use more non-lethal methods of suicide, Bettridge and Favreau (1995) believe that the female suicide attempt should be understood as a "cry for connection" since the suicidal female's "unmet need is for greater interdependency in relationships" (p. 116).

Gender Differences in Suicide-Related Behaviors

In light of the presented theoretical framework and the gender differences in predictors of suicidal behavior found in a previous study of the 1993 sample data (Vannatta, 1995), this study compared 1993 and 1995 data elicited from the SIAB to investigate the following research questions: (1) Do 1995 data confirm gender differences in suicide-related behaviors found in the 1993 data; and (2) What behavioral trends are exhibited by suicidal adolescents?

Several studies have found that suicidal males are more likely to display actions of substance abuse, school misconduct and violence, while suicidal females are more likely to run away and be sexually promiscuous (Frances & Blumenthal, 1991; Levy & Deykin, 1989; Rosenberg & Latimer, 1966; Shaffer & Caton, 1984; Shaffer et al., 1988).

METHOD

Subjects

The studied district elicited participation from its three junior high and two senior high schools, totaling a population of approximately 4,100 adolescent students in 1993 and 1995.

Parental consent was passively obtained when parents did not communicate their disapproval of participating in the survey to the respective school administration after receiving notification of the purpose and intent of the survey through several school newsletters. Both parents and students were assured anonymity in that the Survey Instrument of Attitude/Behavior (SIAB) would not elicit identifiable information in any way. In 1993, participation was requested of all enrolled secondary students; consequently, 3,438 students completed the survey. The 1995 participants were randomly selected from each secondary school in the district, which resulted in 921 completed surveys.

Instrument

Data were gathered from the Survey Instrument of Attitude/Behavior (SIAB) administered in a school district located in a medium size Midwest city during the spring of 1993 and 1995. The SIAB was developed by the participating school district to fulfill a funding requirement of the Drug-Free Schools and Community Act mandated by the State Department of Education. The purpose of the SIAB was to obtain a district-wide picture of the attitudes and behaviors concerning risk-taking behaviors among adolescents. When the survey development was completed in 1992, the district piloted it with approximately 150 sixth grade students, after which students were interviewed to obtain information regarding the readability of the instrument and possible changes to be implemented. After this pilot study, the survey development committee concluded that the SIAB was at approximately a sixth grade reading level, was adequate in form and content, and did not require any major revisions.

The SIAB contained one-hundred multiple choice questions, which can be divided into six categories: substance use, problems in school, home environment, sexual activity, violence, and suicidal behavior. The demographics of gender, grade, race, and school were obtained through pre-survey items.

Data Collection

The SIAB was administered throughout March of 1993 and 1995 in conjunction with the Survey Instrument of Knowledge of Alcohol & Other Drugs, also developed by the studied district. Both surveys were given over a two day period under the same instructions. To assist the district in obtaining valid results, the instructors overseeing the survey administration were asked to set a serious tone in the classroom by reading several directions to the students prior to taking the survey. After receiving #2 pencils, survey booklets, and NCS forms, students were told the district's purpose in administering the survey and were reminded that the following assessment would not be timed and that no identifiable information would be revealed through participating in the survey. Students were asked to follow along in their survey booklet while an instructor read the survey directions. The instructor guided the students through the pre-survey questions concerning the demographics of gender, grade, race, and school. Upon completion of these items, students were told to use the provided #2 pencil when blackening circles, to erase stray markings, to not write one's name on the survey booklet or NCS form, to raise a hand to ask questions, and to mark only one response for each question.

Having completed the survey, each participant placed the survey's NCS form in a manila envelope that had been set in the back of the classroom. After collecting all of the manila envelopes containing surveys from instructors, the building principals sent the envelopes to the district's assistant superintendent, who then forwarded the surveys to the researcher.

Analysis

From the completed surveys, several were eliminated for containing a significant number of missing responses, leaving 3,398 (1993) student surveys and 884 (1995) student surveys for analysis. Factor analyses reduced the 100 item survey to following fifteen

independent factors with the respective alpha coefficients of reliability for 1993 and 1995: cigarette use (.8279, .8283), smokeless tobacco use (.7903, .7705), alcohol use (.9058, .9082), alcohol behavior (.8678, .8505), hard drug use (.9498, .9293), marijuana use (.8858, .8972), over-the-counter drug use (.7371, .7249), school misconduct (.6209, .5607), academic difficulties (.4563, .4439), home environment (.5353, .3571.), miscommunication with parents (.6499, .6176), unfair/strict rules (3365, .3132) sexual activity (.8167, .8270), forcible sex (.4681, .4037), and violence (.8053, 7793). Specific factor definitions are as follows:

Academic Difficulties: Poor academic performance in classes, such as low current grades, being held back a grade, previous course failures.

Alcohol Behavior: Behaviors exhibited during alcohol use, such as drinking in school, being drunk in school, drinking and driving, riding with a drunk driver, drinking before intercourse.

Home Environment: Frequency of running away; guardian with whom the adolescent is living; parental expectations of, knowledge of, and reaction to adolescent drug and alcohol use; being adopted; family problems with drugs/alcohol.

Forcible Sex: Being forced to have sex, forcing someone to have sexual contact, and being touched by or touching a relative.

Miscommunication with Parents: Frequency of talking with mother or father about problems.

School Misconduct: Behaviors displayed in the school environment that may lead to negative consequences: poor class attendance, little time spent studying, being sent to the principal's office, and little participation in extra-curricular activities.

Sexual Activity: Behaviors regarding the practice of sexual intercourse, such as the number of partners, age of first sexual experience, contraceptive use.

Substance Use: Use (frequency during life and the past 30 days and age of first use) involving the substances of alcohol, cigarettes, smokeless tobacco, marijuana, hard drugs (i.e. cocaine, crack, inhalants, acid, steroids), over-the-counter drugs (i.e. NoDoz, Vivarin, Dexatrim).

Unfair/Strict Rules: Poor perceptions of parents rules in terms of fairness and strictness; 30 day frequency of getting in trouble with parents.

Violence: 30 day frequency of getting in trouble with the law, damaging property, and fighting.

The dependent variable of suicidal behavior was addressed in two ways. The first method created a total score for each respondent by summing the three SIAB items that related to suicide: item 87, item 88, and item 89. Item 87 addressed the frequency of considering a suicide attempt, item 88 pertained to frequency of planning a suicide attempt, and item 89 addressed the frequency of actual suicide attempts. All three items contained frequencies for the past 30 days. Therefore, a high score refers to a high frequency of suicidal activity within the 30 day period. The range of values for this variable was a minimum of zero (no suicidal activity) to a maximum of 15 (high suicidal activity). Since levels of suicidal activity can be ascertained from this score, this first dependent variable of suicidal behavior was labeled suicidal activity.

The second method dichotomized the variable of suicidal behavior by dividing the studied sample into two groups according to their responses to items 87 to 89: those who reported no suicidal activity and those who reported considering, planning, or attempting suicide at least once in the last 30 days. Because the level of suicidal activity was not differentiated in this variable, it was labeled suicidal tendency. In 1993, 23.2% of the participants reported suicidal tendency, whereas 21.3% reported suicidal tendency in 1995. The reliability of this scale (items 87 to 89) was also calculated generating an alpha coefficient

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of .8851 in 1993 and .8152 in 1995. Stepwise forward regression ordered the independent factors in predicting suicidal activity and suicidal tendency for the male and female samples. In addition, logistic regression determined the probabilities of these factors in predicting suicidal tendency for the male and female samples.

RESULTS

Demographic and Behavioral Characteristics

Table 1 presents the demographics of grade, gender, ethnicity, and guardian. Table 2

TABLE 1
Demographic Information on Gender, Grade, Ethnicity, and Guardian for Survey Respondents

Characteristic	1993 N (%)	1995 N (%)
Grade		
7th	696 (20.3)	204 (22.3)
8th	616 (17.9)	204 (22.3)
9th	598 (17.4)	189 (20.7)
10th	546 (15.9)	107 (11.7)
11th	522 (15.2)	87 (9.5)
12th	453 (13.2)	122 (13.4)
Gender		
Male	1738 (51.0)	467 (50.9)
Female	1672 (49.0)	450 (49.1)
Ethnicity		
Caucasian	2950 (86.2)	776 (84.6)
Native American	114 (3.3)	19 (2.1)
African American	85 (2.5)	30 (3.3)
Hispanic	85 (2.5)	29 (3.2)
Asian	78 (2.3)	24 (2.6)
Other	103 (3.0)	39 (4.3)
Guardian		
Both parents	2275 (66.3)	584 (65.1)
Mother only	436 (12.7)	122 (13.6)
Father only	95 (2.8)	36 (4.0)
Mother & Stepfather	354 (10.3)	94 (10.5)
Father & Stepmother	98 (2.9)	29 (3.2)
Guardian/foster parents	54 (1.6)	10 (1.1)
Other	118 (3.4)	22 (2.4)

and 3 summarize the risk behaviors reported by the 1993 and 1995 participants. Use of smokeless tobacco, alcohol, marijuana, inhalants, cocaine, and prescriptions drugs increased slightly from 1993 to 1995. In addition, all levels of male suicidal behavior (considering, planning, and attempting) increased from 1993 to 1995; while female suicidal behaviors either decreased or remained stable (See Table 4).

TABLE 2
Frequency and Percentage of Students Using Substance in the Past 30 Days

Substance	1993 N (%)	1995 N (%)
Cigarettes	1113 (32.4)	255 (30.9)
Smokeless Tobacco	525 (15.3)	139 (15.5)
Alcohol	1392 (40.8)	380 (42.2)
Marijuana	526 (15.4)	161 (18.9)
Inhalants	264 (7.7)	62 (8.0)
Cocaine	233 (6.8)	64 (7.2)
Crack	233 (6.8)	50 (6.0)
Steroids	179 (5.4)	41 (4.9)
Prescription Drugs	356 (10.4)	98 (10.7)
Over-the-Counter Drugs	878 (25.4)	213 (23.5)
Acid	315 (9.3)	71 (8.3)

TABLE 3
Frequency and Percentage of Students by Risk Behavior in the Past 30 Days

Risk Behavior	1993 N (%)	1995 N (%)
Forced to have sex	300 (11.1)	84 (9.3)
Trouble w/ Law	403 (11.8)	108 (12.3)
Physically Fought	853 (24.9)	241 (22.3)

TABLE 4
Frequency and Percentage of Male and Female Students by Suicidal Behavior in the Past 30 Days

Suicidal Behavior	1993 N (%)	1995 N (%)
Considering Suicide		
Males	220 (14.5)	92 (20.8)
Females	388 (24.6)	83 (19.1)
Planning Suicide		
Males	167 (11.0)	71 (15.7)
Females	235 (14.9)	64 (14.6)
Attempting Suicide		
Males	102 (6.6)	44 (9.8)
Females	115 (7.3)	38 (8.6)

Stepwise Regression Results

A stepwise forward regression analysis prioritized the independent factors in order of their ability to contribute to the overall prediction of suicidal activity and suicidal tendency for males and females. The stepwise regression results for the males and females are presented in Table 5. Predictors for 1993 and 1995 male suicidal activity were quite similar; however the 1993 leading predictors (52.1%) account for more variability in male suicidal activity than the 1995 identified predictors (32.5%). Predictors of female suicidal activity differed considerably as leading predictors in 1993 were violence and home environment whereas hard drug use and unfair/strict rules were leading predictors in 1995. Again, 1993 predicators account for more variability in female suicidal activity than the 1995 predictors.

A comparison of the 1993 and 1995 forward regression analysis of suicidal tendency produced similar results (See Table 6). 1993 predictors accounted for more variability in suicidal tendency among males and females. Leading factors predicting male suicidal tendency were similar; while predictors for female suicidal tendency were different.

TABLE 5
Comparison between 1993 and 1995 Stepwise Regression Results for Male and Female Suicidal Activity

1993 Males (N=1,712)

Step	Factor	R^2	R^2Chg
1	Violence	.3913	.3913
2	Home Environment	.4501	.0588
3	Forcible Sex	.4916	.0415
4	Unfair/Strict Rules	.5044	.0127
5	Alcohol Behavior	.5185	.0115

1995 Males (N=439)

Step	Factor	R^2	R^2Chg
1	Violence	.1913	.1913
2	Forcible Sex	.2586	.0673
3	Unfair/Strict Rules	.3029	.0443
4	Sexual Activity	.3252	.0223

1993 Females (N=1,659)

Step	Factor	R^2	R^2Chg
1	Violence	.2600	.2600
2	Home Environment	.2926	.0326
3	Unfair/Strict Rules	.3229	.0303
4	Forcible Sex	.3450	.0221
5	Sexual Activity	.3645	.0134

1995 Females (N=424)

Step	Factor	R^2	R^2Chg
1	Hard Drug Use	.1625	.1625
2	Unfair/Strict Rules	.2199	.0574
3	Academic Diff.	.2578	.0379
4	Miscom. w/Parents	.2851	.0273

Note: $p \leq .0001$

TABLE 6
Comparison between 1993 and 1995 Stepwise Regression Results for Male and Female Suicidal Tendency

1993 Males (N=1,712)

Step	Factor	R^2	R^2Chg
1	School Misconduct	.2294	.2294
2	Forcible Sex	.2590	.0297
3	Unfair/Strict Rules	.2817	.0227
4	Home Environment	.2945	.0128

1995 Males (N=439)

Step	Factor	R^2	R^2Chg
1	School Misconduct	.1346	.1346
2	Unfair/Strict Rules	.1865	.0519
3	Forcible Sex	.2328	.0463
4	Sexual Activity	.2482	.0154

1993 Females (N=1,659)

Step	Factor	R^2	R^2Chg
1	School Misconduct	.1238	.1238
2	Over-the-Counter	.1793	.0555
3	Unfair/Strict Rules	.2071	.0279
4	Cigarette Use	.2289	.0218

1995 Females (N=424)

Step	Factor	R^2	R^2Chg
1	Unfair/Strict Rules	.1022	.1022
2	Sexual Activity	.1618	.0596
3	Miscom. w/Parents	.1893	.0275
4	School Misconduct	.2069	.0176

Note: $p \leq .0001$

Logistic Regression Results

Logistic regression established odds probabilities of each significant factor predicting suicidal tendency among male and female respondents (Table 7). Each independent factor was dichotomized by gender into those who had and those who had not reported the respective behaviors. Only significant factors generated from the preceding stepwise regression of suicidal tendency, respective to gender, were utilized in this analysis. The comparison of logistic regression results confirmed the gender differences found in the 1993 study in that males reporting aggressive behaviors were more likely to report suicidal tendency. However, while the 1993 and 1995 factors that increased the probability of females reporting suicidal tendency were more passive, these leading factors differed from 1993 to 1995.

TABLE 7
Comparison between 1993 and 1995 Logistic Regression Results for Male and Female Suicidal Tendency

1993 Males (N=1,712)		**1995 Males** (N=439)	
Factor	Odds Probability (%)	Factor	Odds Probability (%)
Forcible Sex	57.5	Forcible Sex	58.2
School Misconduct	43.2	Unfair/Strict Rules	48.1
Unfair/Strict Rules	38.3	Sexual Activity	45.2
Home Environment	37.3	Miscom. w/Parents	23.6
Over-the-Counter	27.0		
Academic Difficulties	26.8		
1993 Females (N=1,659)		**1995 Females** (N=424)	
Factor	Odds Probability (%)	Factor	Odds Probability (%)
Over-the-Counter	37.8	Miscom. w/Parents	41.7
Cigarette Use	34.5	School Misconduct	40.5
Forcible Sex	34.0	Sexual Activity	39.9
Unfair/Strict Rules	28.9	Unfair/Strict Rules	33.5
School Misconduct	26.7		
Home Environment	26.1		
Miscom. w/Parents	17.3		

DISCUSSION

Comparing Dependent Variables

The leading predictor for suicidal activity among 1993 and 1995 males and 1993 females was violence. Hard drug use was the leading predictor for 1995 female suicidal activity. Both factors of violence and hard drug use are considered aggressive and destructive. In contrast, the leading predictor for suicidal tendency among 1993 and 1995 males and 1993 females was school misconduct; the leading predictor for 1995 female suicidal tendency was unfair/strict rules. Consequently, predictors for suicidal tendency were much less aggressive and destructive than predictors of suicidal activity. These differences in predictors were most likely due to the differences in the dependent variables, suicidal activity and suicidal tendency. As an interval/ratio variable, suicidal activity differentiates the various levels of suicidality such as considering, planning and attempting. As these levels of suicidality increase so does the frequency of violent and more destructive behaviors. Specific items addressed in the factor of violence were frequency of getting in trouble with the law, physically fighting, and damaging property. Such behaviors were also found related to suicide completers by Shafii et al. (1985) and Alessi et al. (1984).

In contrast to suicidal activity, the variable of suicidal tendency in no way measures levels of suicidality; thus, violence was not a leading predictor of suicidal tendency. In addition, the majority of those who reported suicidal tendency had only considered and/or planned suicide. Therefore, this variable is somewhat representative of early suicidal behavior, which is often characterized as less aggressive and violent.

Comparing Gender

Several conclusions were derived concerning risk behaviors/factors related to suicidal behaviors among males and females. In general, the SIAB was better in predicting factors related to suicidal behavior for males than for females. Therefore, the predictors for males are

stronger as they account for more variability in male suicidal behavior. This may be due to the content addressed in a majority of the survey questions, as many of them dealt with overt aggressive behaviors, more often related to males than females.

When comparing logistic regression results with respect to gender, the leading factors increasing the probability for male suicidal tendency were generally more violent and aggressive in comparison to leading factors increasing the probability for female suicidal tendency. Forcible sex increased the probability of male suicidal tendency by 57.5% in 1993 and 58.2% in 1995. Although forcible sex increased female suicidal tendency by 34.0% in 1993, this factor was not even a predictor of female suicidal tendency in 1995. These differences may be due to the item representation for this factor, which addresses both roles of forcible sex—being a victim and a perpetrator. However, the question with the highest loading for this factor was, "Have you forced anyone to have sexual contact?" Since the majority responding affirmatively to this question was male, this factor is more representative of males than females. In addition, the majority of males who reported forcing someone to have sexual contact also reported being a victim of forcible sex. In contrast, females primarily responded affirmatively to being a victim rather than a perpetrator. A great deal of literature supports the increased risk of suicidal behavior among sexual abuse victims, but minimal literature exists that supports or negates the relation of suicidality and being a perpetrator (Fondacaro & Butler, 1995). These findings do support Curran's (1987) claim in which males are more likely than females to demonstrate aggressive behaviors when faced with stressors.

The leading factors increasing female suicidal tendency were over-the-counter drug use in 1993 and miscommunication with parents in 1995—both of which are considerably less aggressive and violent than forcible sex. Examples of over-the-counter drugs given in the survey were Vivarin, NoDoz, and Dexatrim. One explanation for this predictor may be that females are more likely to use diet pills for weight problems, use which may indicate poor

body image and low self-esteem often associated with suicidal females (Clifton & Lee, 1995). Another explanation may be that females are more likely to overdose on over-the-counter drugs as a suicide method, whereas males, when overdosing, use harder, more lethal drugs (Stillion et al., 1989).

The factor of miscommunication with parents represents the adolescent's ability to discuss problems with one's mother and father. Recalling that the female experience of adolescence emphasizes relationships and that the female suicide attempt may be a "cry for connection", this lack of communication and connection with parents is a very likely predictor of female suicidal tendency. Supporting these findings, Stephens (1986) found that 64% of suicidal females described their parents as nonnurturing.

CONCLUSIONS

A comparison of the 1993 and 1995 results generated the following conclusions: (1) the independent factors accounted for more variance in male suicidal activity than in female suicidal activity, (2) as the level of suicidality increased, so did the frequency of violent and destructive behaviors increase among both genders, and (3) gender differences were confirmed as suicidal males reported more aggressive risk behaviors than suicidal females. While the presented findings and conclusions shed some light on the reality of adolescent suicide, further research is necessary to fully understand risk behaviors related to adolescent suicidality and the gender differences that may exist.

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